Cambridge Technicals

Sport

Unit 2C: Physical preparation and readiness for sport and physical activity

Level 2 Cambridge Technical in Sport and Physical Activity

05885 - 05886

Mark Scheme for June 2024

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

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Question			Answer	Marks	Guidance
1			Three marks for three from: ● means without oxygen/oxygen not present for energy production ● uses glycogen stored in the muscle for energy ● used in short duration activity (e.g. the tennis player when sprinting to a drop shot) ● used during high intensity activity/explosive/maximum effort (e.g. a tennis rally with powerful shots) One mark for suitable example from sport e.g. tennis serve, football shot, 100m sprint	4	Descriptions do not have to be applied to the sporting example to gain each mark point. Accept any suitable example which is short duration/high intensity/explosive
2	**(a)**		True	1	
	(b)		True	1	

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Question			Answer	Marks	Guidance
3*			1. Bones become stronger ● as they increase in size and density. ● due to the impact on the road ● this, in turn, reduces the risk of osteoporosis. 2. Increase in synovial fluid into joints ● means a decrease in its viscosity over time. ● reducing friction at joints ● improving the range of movement at the joint ● they can lengthen their stride and run quicker/ more efficiently. ● reduces the risk of osteoarthritis. 3. Cartilage in joints grows thicker and strengthens the joint ● able to take the impact from the road. ● reduction of pain 4. Ligaments are able to bear more load ● due to increase in collagen fibres. ● increasing stability of joint ● reducing risk of injury 5. Tendons become stronger ● due to increase in collagen fibres. ● allowing them to cope with additional stress/generate more force 6. Muscle hypertrophy ● increases the size and strength of muscles, ● allowing them to cope with additional stress/generate more force 7. Muscles are able to produce more energy ● able to perform more efficiently for longer	6	MB3 – 5-6 marks ● Answer offers suitable suggestion with full justification and considers all/most of the factors. ● Quality of written communication show few errors in grammar, punctuation, and spelling MB2 – 3-4 marks ● Answer offers suitable suggestion with justification but may not take all factors into consideration ● Quality of written communication show occasional errors in grammar, punctuation and spelling MB1 – 1-2 marks ● Answer offers suggestions of activities but gives little or no justification. ● Answer may not take into consideration all of the factors. ● Quality of written communication show errors in grammar, punctuation and spelling may be noticeable and intrusive 0 = answer worthy of no credit

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<table>
<tr><th colspan="3">Question</th><th>Answer</th><th>Marks</th><th>Guidance</th></tr>
<tr><td>4</td><td></td><td></td><td>Four marks for four from:

● allows them to forget what is causing the problems/offer a distraction
● improves mood/endorphins (hormones) released
● become more socially active/able to share problems with friends
● improves self-esteem/self-confidence
● gives them a sense of purpose
● make them feel good about their body/control body weight success from achieving goals/can run further/ do more activity
● provide fun/enjoyment
● relieve stress/anxiety/depression
● improve sleep patterns</td><td>4</td><td>Accept mark if embedded within an example
Accept any relevant answer</td></tr>
<tr><td>5</td><td></td><td></td><td>
<table>
<tr><th>Short term</th><th>Long term</th></tr>
<tr><td>X</td><td></td></tr>
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<tr><th colspan="3">Question</th><th>Answer</th><th>Marks</th><th>Guidance</th></tr>
<tr><td>6</td><td></td><td></td><td>Short term effect: muscle fibre tears
Impact: muscle soreness and fatigue

Short term effect: muscles stretch
Impact: improving flexibility and mobility

Short term effect: tendons stretch
Impact: improving flexibility

Short term effect: lactic acid builds in the working muscles
Impact: resulting in muscle soreness and fatigue</td><td>2</td><td>One mark for the effect, one for the impact related to that effect</td></tr>
<tr><td>7</td><td>(a)</td><td></td><td><table><tr><th>Phase of warm up</th><th>Badminton related example</th></tr><tr><td>1. Pulse raising exercise</td><td></td></tr><tr><td></td><td>2. Arm circles</td></tr><tr><td>3. Dynamic movements</td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td>4. Practising a badminton serve</td></tr></table></td><td>4</td><td>Accept any examples suitable to badminton for 2. and 4.</td></tr>
</table>

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Question			Answer	Marks	Guidance
7	**(b)**		Two marks for two from: ● to **gradually** lower heart rate (e.g. to prevent heart problems) ● to **gradually** lower body temperature ● to **maintain** rate of blood circulation/prevent rate of blood circulation from **dropping too quickly** (e.g. to prevent blood pooling that can lead to dizziness/faintness) ● to **gradually** reduce breathing rate ● to remove waste products i.e. lactic acid (to prevent stiffness/soreness in muscles) and carbon dioxide	2	Accept mark if embedded within an example Accept any relevant answer Answers should be qualified with '**gradually**' or similar– do not accept 'lower heart rate/body temperature' on its own, for example
8			Wheelchair basketball Wheelchair rugby	1	Accept any suitable example Must be a team game – do not accept wheelchair tennis, badminton etc… unless doubles specified
9			Five marks for five from: ● enjoyment (e.g. fun environment) ● maintain/promote healthy physical fitness (e.g. strength of muscles and bones, function of heart and lungs, joint flexibility etc) ● increase social circles (e.g. team sports help with meeting new people) ● improve social skills (e.g. teamwork, communication) ● improve physical health, i.e. manage medical conditions control weight prevent illnesses (eg arthritis, osteoporosis) ● improve mental health (e.g. improves mood)	5	Accept mark if embedded within an example Accept any relevant answer

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<tr><th colspan="3">Question</th><th>Answer</th><th>Marks</th><th>Guidance</th></tr>
<tr><td>10</td><td>(a)</td><td></td><td><table><tr><td>R</td><td>Rest</td></tr><tr><td>I</td><td></td></tr><tr><td>C</td><td>Compression/Compress</td></tr><tr><td>E</td><td>Elevation/Elevate</td></tr></table></td><td>3</td><td></td></tr>
<tr><td></td><td>(b)</td><td></td><td>Sprain (ligament/joint)

Strain (muscle)</td><td>1</td><td>Accept any suitable example of a sprain or strain

Accept bruise/contusion/abrasions/cuts/blisters.

Accept tennis elbow/shin splints</td></tr>
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